

P/N: CM174

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General description	
Part number	CM174
Part name	Imaging 600A AC/DC Clamp Meter with IGM
<p>The FLIR CM174 Imaging 600A AC/DC Clamp Meter with IGM is the first clamp meter equipped with a built-in thermal imager that can quickly lead you to problems you can't see with a standard clamp meter. Featuring Infrared Guided Measurement (IGM) technology, the FLIR CM174 visually guides you to the precise location of a potential electrical issue, identifying dangerous and unknown problem areas safely. Confirm your findings with accurate amperage and voltage measurements, and center-point temperature readings. The narrow jaw enables greater accessibility, and its compact form factor fits easily into a pocket – so you can have thermal imaging at your fingertips everywhere you go. The FLIR CM174 will quickly become your primary electrical troubleshooting tool.</p>	
<p>Find problems faster with IGM:</p> <ul style="list-style-type: none"> • Visually identify electrical issues with the first thermal imaging clamp meter. • Conquer cluttered wires and cables—IGM can quickly guide you in the right direction. • All-in-one tool—carry just one device and always have access to thermal imaging. • Work safely—scan a panel or cabinet for hazards using IGM without direct contact. 	
<p>Confirm your findings:</p> <ul style="list-style-type: none"> • Verify problems, check loads, and validate hot spots. • Center-point temperature to confirm hot spot. • Amperage and voltage measurements to check the load. • The laser and crosshair pinpoint the location of the problem found in thermal image. 	
<p>Solve complex electrical issues:</p> <ul style="list-style-type: none"> • Design and functionality vital to professionals. • Narrow jaw and built-in worklights help you access difficult locations with lighting issues. • Advanced electrical features: true RMS, LoZ, VFD mode, inrush, smart diode with disable. • Expandable to 3000 A AC with FLIR flex accessories. 	
Thermal imaging	
Detector type	FLIR Lepton; micro-bolometer focal plane array (FPA)
IR imaging resolution (V × H)	60 × 80 pixels
IR imaging field of view (V × H)	50.0° × 38.6°
IR imaging spectral response	8–14 μm
Thermal sensitivity	150 mK
IR image capture frequency	9 Hz
IR image color palettes	Rainbow, Iron, Gray scale



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Thermal imaging	
Laser pointer	Class I (red)
IR temperature measurement range	-25 to +150°C (-13 to +302°F)
Over- and under-range indication	OL
Temperature reading stabilization	Dashes are displayed for approximately 30 seconds as the temperature reading stabilizes
IR temperature resolution	0.1°C (0.1°F)
IR temperature accuracy	5.4°F (±3°C) or ± 3% of the reading (whichever is greater)
Distance-to-spot (D:S) ratio	30:1
Emissivity adjustment	4 presets plus a custom setting (0.01–0.99)
Targeting	Displayed cross-hairs pinpoint the center of the measurement spot
Hold	Image with measurement

Electrical measurement	
True RMS voltage and current	Yes
Auto-ranging	Yes, with manual range option
DC V range	60.00 V, 600.0 V, 1000 V
DC V accuracy	± (1.0% + 5 dgt)
AC V range	60.00 V, 600.0 V, 1000 V
AC V accuracy	±(1.0% + 5 dgt) 45–400 Hz
AC V VFD range	60.00 V, 600.0 V, 1000 V
AC V VFD accuracy	±(1% + 5 dgt) 45–65 Hz, ±(5% + 5 dgt) 65–400 Hz
LoZ range	60.00 V, 600.0 V, 1000 V
LoZ accuracy	±(1% + 5 dgt) 45–65 Hz, ±(5% + 5 dgt) 65–400 Hz
LoZ input impedance	2.5 kΩ
AC A range	60.00 A, 600.0 A
AC A accuracy	±(2% + 5 dgt) 45–400 Hz
AC A VFD range	60.00 A, 600.0 A
AC A VFD accuracy	±(2% + 5 dgt) 45–65 Hz, ±(6% + 5 dgt) 65–400 Hz
AC A inrush range and accuracy	60.00 A ± (3% + 0.3 A), 600.0 A ± (3% + 5 dgt)
DC A range	60.00 A, 600.0 A
DC A accuracy	±(2% + 5 dgt)
Frequency range	600.0 Hz, 6.000 kHz, 60.00 kHz
Frequency accuracy	±(0.1% + 2 dgt)
Resistance range	600.0 Ω, 6.000 kΩ
Resistance	±(1.0% + 5 dgt)
Continuity	600.0 Ω ± (1.0% + 5 dgt)
Diode	1.5 V ± (1.5% + 5 dgt)
Capacitance	1–1000 μF ± (1.0% + 4 dgt)
Flex input AC A range	30.00 A, 300.0 A, 3000 A
Flex input AC A accuracy	±(1% + 5 dgt) 45–400Hz
Flex input frequency range	600.0 Hz, 6.000 kHz, 10.00 kHz



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Electrical measurement	
Flex input AC A accuracy	±(0.1% + 2 dgt)
Additional measurement functions	DCA zero, data hold, minimum/maximum
General	
Worklights	Dual white LEDs
Jaw opening:	35 mm (1.38 in.)
Display counts	0–6000
Measuring rate	3 times per second
Calibration cycle	1 year calibration cycle recommended
Auto power off	Programmable: off, 1, 2, 5, or 10 minutes
Power source	4 × 1.5 V AAA alkaline batteries
Battery life	Clamp mode ~10 hours; IGMTM mode 3 hours (with alkaline batteries and worklight off)
Environmental data	
Operational temperature	–10 to +10°C (14–50°F) (non-condensing) 10–30°C (50–86°F) (≤80% relative humidity (RH)) 30–40°C (86–104°F) (≤75% RH) 40–50°C (104–122°F) (≤45% RH)
Storage temperature	–20 to +60°C (4–140°F)
Relative humidity	0–80% RH (batteries not installed)
Temperature coefficient	0.2 × (specified accuracy)/°C, <18°C (64.4°F), >28°C (82.4°F)
Operating altitude	2000 m (6562 ft.)
Pollution degree	2
Drop test	2 m (6.6 ft.)
Physical data	
Dimensions: (D × W × L)	43 mm × 89 mm × 241 mm (1.7 in. × 3.5 in. × 9.5 in.)
Weight:	426 g (15.0 oz.) including batteries
Batteries	4 × 1.5 V AAA alkaline batteries
Warranty	
Warranty	10 years on the product, 10 years on the detector with registration
Certifications	
Agency approvals	CE, RCM, KC
Certifications	UL, cUL
Safety category rating	EN 61010-1 CAT IV-600 V, CAT III-1000 V, EN 61010-2-032
Shipping information	
Packaging type	Retail color box
Packaging contents	CM174, 4 × AAA batteries, premium CAT IV silicone test leads, quick start guide, user manual (CD), warranty registration card
Packaging weight	0.8 kg (1.8 lb.)
Packaging dimensions (H × W × L)	33 cm × 14 cm × 12 cm (13 in. × 5.5 in. × 4.75 in.)
Master carton weight	11.8 kg (26.1 lb.)



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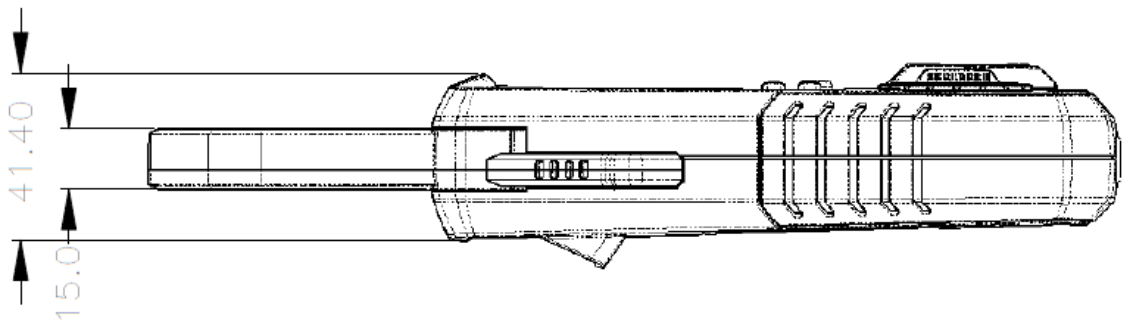
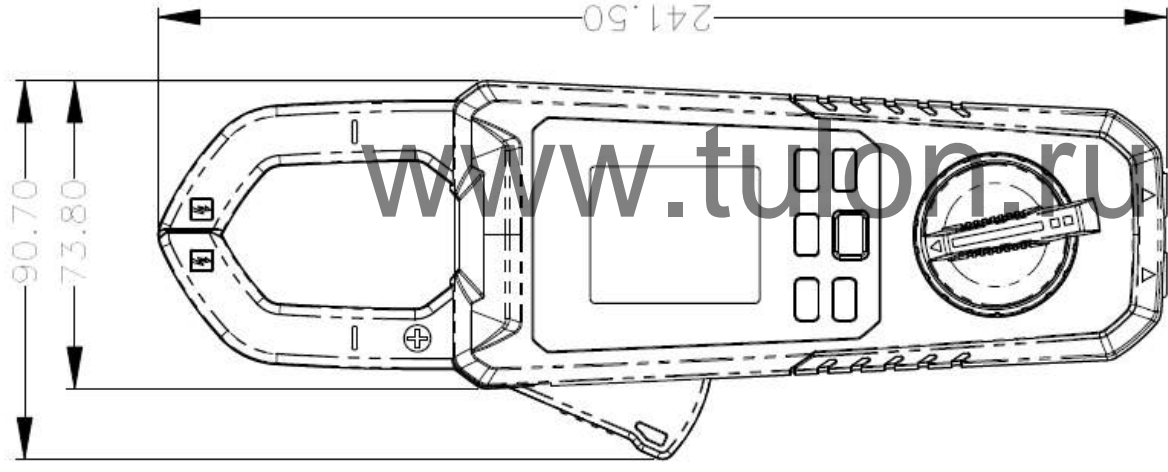
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Shipping information	
Master carton dimensions (H x W x L)	62.3 cm x 29.3 cm x 36.1 cm (24.6 in. x 11.6 in. x 14.3 in.)
Master carton quantity	12
UPC	793950371749
EAN	0793950371749
Country of origin	Taiwan
Tariff code	9030.31.0000

Accessories	
TA72	Universal Flex Current Probe Accessory (10 in.)
TA74	Universal Flex Current Probe Accessory (18 in.)
TA80	CAT IV Silicone Test Leads
TA70	CAT IV Insulated Alligator Probes
TA55	AC Current Line Splitter (120 V, US plug)

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Modified Date Thursday, October 29, 2015	Modified By T&M Engineering
Description CM174	
Units Millimeters	Scale Not to Scale